

APPENDIX C

TECHNICAL CAREER DEVELOPMENT PLAN FOR GEOTECHNICAL ENGINEERS

Grade (KSA)	Formal Training (Source)	On-the-Job Training	Developmental Assignment
GS-05/07/09			
(1)	Drilling and Sampling for Engineering Purposes - PROSPECT #216	Geotechnical field investigations assignment for 1 to 3 months	Rotational assignments within the Geotechnical Branch
	Lab Testing and/or Analysis of test results (University short course)	Laboratory testing/analysis, District Laboratory (2-4 weeks)	Developmental assignment in Design Branch
(2)	Computer Applications for Engineers and Managers - PROSPECT # 19	Engineering application packages (slope stability, seepage analyses, pile design) taught by senior engineers	
(3)	Technical briefing - short courses by vendors	Prepare and present technical briefings to the design team/supervisor	
(4)	Effective Technical Communications short course (vendors)	Prepare/draft portions of technical reports	
(5)	Team Building / TQM / CQI (in-house)		
(6)	New Employee Orientation (local)	Assigned an organizational mentor	Developmental assignment in Design Branch and H & H Branch
GS-11			
	Priority 1		
(7)	Shear Strength - PROSPECT # 248		Six- month assignment in a Planning Division
	Seepage and Piping - PROSPECT # 250		
	Soil-Structure Interaction - PROSPECT #113		
	Advanced Computer Application in Geotechnical Engineering - University/vendor - short courses		
	Priority 2		
	Dam Safety Course - PROSPECT #028		
	Seismic Design for Buildings - PROSPECT #027		

Grade (KSA)	Formal Training (Source)	On-the-Job Training	Developmental Assignment
GS-11 (continued)			
	Seismic Stability Evaluation of Embankment Dams - PROSPECT #247		
	Geotechnical Aspects of HTW - PROSPECT #395		
	Priority 3		
	Stream-bank Erosion and Protection - PROSPECT #285		
	Fundamentals of Grouting - PROSPECT #217		
	Ground Modification and Improvement - PROSPECT #249		
	Intensive Course in Geotechnical Engineering (Virginia Tech)		
	Professional conferences and seminars		
(8)	Priority 1		
	Groundwater Modeling, - PROSPECT # 108		
	CADD, slope stability; seepage modeling, digital terrain modeling (vendor, university and a Intergraph short courses)		
	Priority 2		
	Pile design; soil reinforcement (vendor, university, a Intergraph short course)		
(9)	Earthwork I-QV - PROSPECT # 040 Earthwork II-QV - PROSPECT #200		Six-month developmental assignment in a construction field office

Grade (KSA)	Formal Training (Source)	On-the-Job Training	Developmental Assignment
GS-11 (continued)			
(10)	Clay Liner Design, Basic Spill Response, vendor or university Safety and Health for Hazardous Waste Sites - PROSPECT #351 Safety and Health for Hazardous Waste Sites-8 - Hour refresher - PROSPECT #766 HTRW Overview (identification of toxic waste) - PROSPECT # 350		
(11)	Instrumentation - university short course	Assignment to dam safety organizational unit and participate in periodic inspections	
(12)	Dam Safety Course - PROSPECT # 028 Training Aids for Dam Safety (TADS) Nondestructive testing - vendor or university short course)	Participation in Periodic Inspection/Continuing	
(13)	Various short courses seminars in laboratory testing	Two to four week assignment at a district laboratory	
(14)	Probability and Reliability in Geotechnical Engineering - PROSPECT #279		
(15)	Required or supplemental reading for self-development in Corps technical libraries, professional organization memberships		
(16)	Groundwater Modeling -- PROSPECT #108 Advanced short courses, seminars, and conferences)	Soil/structure interaction, seismic evaluations and foundation design	Long term training in geotechnical engineering - graduate level

Grade (KSA)	Formal Training (Source)	On-the-Job Training	Developmental Assignment
GS-11 (continued)			
(17)	A/E Contracting - PROSPECT # 004 A/E Cost Contracting - PROSPECT #292 Specification Writing - Construction PROSPECT #185		
GS-12			
(18)	Short courses or seminars universities and vendors	Conduct briefings	
(19)	Leadership development programs (DA sources)	Assignments as team leader	
(20)		Assignment as technical assistant for emergencies	Participation in emergency management exercises with FEMA
(21)	Operating Budget Applications for Non-financial Managers - PROSPECT #746		
(22)		Applying design policies and procedures as technical manager	
(23)			Developmental assignment to construction field office for 6 months
(24)	A/E Contracting - PROSPECT #004 See KSA #17.		
(25)	See KSA #7, 10, 11 and 12.		Developmental assignment at an MSC
GS-13/14			
(26)			Developmental assignment to planning element for 6 months
(27)	Advanced technical specialty short courses, (seismic, coastal, wetlands; etc.) as required for the regional area		
(28)			Developmental assignment at MSC or USACE

Grade (KSA)	Formal Training (Source)	On-the-Job Training	Developmental Assignment
GS-13/14 (continued)			
(29)	Middle Managers Course (TRADOC)		
	Federal Executive Program (OPM)		
(30)	Value Engineering Workshop PROSPECT # 110	Serve as VE team member or leader	
(31)		Active participation in professional organizations such as ASCE, USCOLD, ACI, ASDSO	Developmental assignment in MSC or HQ Dam Safety Office
		Prepare and present technical papers at ASCE, USCOLD, ACI, ASDSO conferences	
(32)		Assignments in Operations Division	
((33)	Masters level course work in geotechnical engineering		
GS-13/14 Manager			
(34)		Assignment as COR for an A/E contract	
(35)	Support for Others Seminar	Active participation in professional such as ASCE, USCOLD, ACI and ASDSO	Developmental assignment in project management
		Serve on regional committees and task forces/groups	
		Attend local/regional seminars, conferences, and conventions	
(36)	Read newsletters and technical journals.		
(37)	Partnering training, local vendors Team Building - See KSA #5.		
(38)	See KSA #35.		
(39)	Specialty courses and seminars		

Grade (KSA)	Formal Training (Source)	On-the-Job Training	Developmental Assignment
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GS-13/14 Manager (continued)

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| (40) | A/E Contracting - PROSPECT
#004 - See KSA #17

Negotiating, Bargaining and
Dispute Resolution -
PROSPECT # 306 | | |
| (41) | Instructional Methods - PROSPECT #064 | | |

GS-15 Technical Expert

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| (42) | Masters level work in
Geotechnical Engineering | | |
| (43) | | Review of the criteria and standards used in
other agencies and the profession | |
| (44) | | Assignment to an interagency working group | |
| (45) | ` | Involvement in the independent technical review
of complex projects or modifications | |
| (46) | | Manage soils portion of the Civil Works
Research and Development program | |
| (47) | Effective writing -
local | | |

GM-15 Technical Manager

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| (48) | Work management - local | | |
| (49) | | Interagency review groups for technical needs | |
| (50) | Short courses and seminars | Working meetings within the organization for
development of technical criteria and standards | |
| (51) | Leadership courses -
local, Federal Executive
Institute - OPM | Participation in professional organizational work groups | |
| (52) | Effective briefing
techniques - local | Formal presentation to peers and Chief, Engineering
Division | |
| (53) | | Serve as representative on interagency and other task groups | |